

What Is Claimed:

1. An isolated nucleic acid molecule selected from the group consisting of: (a) an isolated nucleic acid molecule comprising SEQ ID NO: 1, 3, 5 or 7, (b) an isolated
5 nucleic acid molecule encoding SEQ ID NO: 6 or 8, (c) an isolated nucleic acid molecule that encodes a protein that is expressed in liver cancer and that exhibits at least about 95% nucleotide sequence identity over the entire contiguous sequence of SEQ ID NO: 5, (d) an isolated nucleic acid molecule that encodes a protein that is expressed in liver cancer and that exhibits at least about 75% nucleotide sequence identity over the entire
10 contiguous sequence of SEQ ID NO: 7, and (e) an isolated nucleic acid molecule comprising the complement of a nucleic acid molecule of (a), (b), (c) or (d).
2. The isolated nucleic acid molecule of claim 1, wherein the nucleic acid molecule consists of nucleotides 155-418 of SEQ ID NO: 1.
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3. The isolated nucleic acid molecule of claim 1, wherein the nucleic acid molecule consists of nucleotides 139-402 of SEQ ID NO: 3.
4. The isolated nucleic molecule of claim 1, wherein the nucleic acid molecule
20 comprises nucleotides 32-1384 of SEQ ID NO: 5.
5. The isolated nucleic molecule of claim 1, wherein the nucleic acid molecule comprises nucleotides 32-1387 of SEQ ID NO: 5.
- 25 6. The isolated nucleic acid molecule of claim 1, wherein the nucleic acid molecule consists of nucleotides 32-1384 of SEQ ID NO: 5.
7. The isolated nucleic molecule of claim 1, wherein the nucleic acid molecule comprises nucleotides 41-1501 of SEQ ID NO: 7.

8. The isolated nucleic molecule of claim 1, wherein the nucleic acid molecule comprises nucleotides 41-1504 of SEQ ID NO: 7.

9. The isolated nucleic acid molecule of claim 1, wherein the nucleic acid molecule
5 consists of nucleotides 41-1501 of SEQ ID NO: 7.

10. The isolated nucleic acid molecule of any one of claims 1-9, wherein said nucleic acid molecule is operably linked to one or more expression control elements.

10 11. A vector comprising an isolated nucleic acid molecule of any one of claims 1-9.

12. A host cell transformed to contain the nucleic acid molecule of any one of claims 1-9.

15 13. A host cell comprising a vector of claim 11.

14. A host cell of claim 13, wherein said host cell is selected from the group consisting of prokaryotic host cells and eukaryotic host cells.

20 15. A method for producing a polypeptide comprising culturing a host cell transformed with the nucleic acid molecule of any one of claims 1-9 under conditions in which the protein encoded by said nucleic acid molecule is expressed.

25 16. The method of claim 15, wherein said host cell is selected from the group consisting of prokaryotic host cells and eukaryotic host cells.

17. An isolated polypeptide produced by the method of claim 15.

30 18. An isolated polypeptide or protein selected from the group consisting of an isolated polypeptide comprising the amino acid sequence of SEQ ID NO: 2, 4, 6 or 8, an isolated

polypeptide comprising a fragment of at least 10 amino acids of SEQ ID NO: 2 or 4, an isolated polypeptide comprising conservative amino acid substitutions of SEQ ID NO: 2 or 4, an isolated polypeptide comprising naturally occurring amino acid sequence variants of SEQ ID NO: 2 or 4, an isolated polypeptide exhibiting at least about 75% amino acid sequence identity with SEQ ID NO: 2 or 4, and a protein having at least about 95% amino acid sequence identity with SEQ ID NO: 6 or 8.

19. An isolated antibody or antigen-binding antibody fragment that binds to a polypeptide of claim 18.

20. An antibody of claim 19, wherein said antibody is a monoclonal or a polyclonal antibody.

21. A method of identifying an agent which modulates the expression of a nucleic acid encoding a protein of claim 18, comprising:

exposing cells which express the nucleic acid to the agent; and
determining whether the agent modulates expression of said nucleic acid, thereby identifying an agent which modulates the expression of a nucleic acid encoding the protein.

22. A method of identifying an agent which modulates the level of or at least one activity of a protein of claim 18 or a protein comprising SEQ ID NO: 10, comprising:

exposing cells which express the protein to the agent;
determining whether the agent modulates the level of or at least one activity of said protein, thereby identifying an agent which modulates the level of or at least one activity of the protein.

23. The method of claim 22, wherein the agent modulates one activity of the protein.

24. A method of identifying binding partners for a protein of claim 18 or a protein

comprising SEQ ID NO: 10, comprising:

exposing said protein to a potential binding partner; and

determining if the potential binding partner binds to said protein, thereby identifying binding partners for the protein.

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25. A method of modulating the expression of a nucleic acid encoding a protein of claim 18 or a protein comprising SEQ ID NO: 10, comprising:

administering an effective amount of an agent which modulates the expression of a nucleic acid encoding the protein.

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26. A method of modulating at least one activity of a protein of claim 18 or a protein comprising SEQ ID NO: 10, comprising:

administering an effective amount of an agent which modulates at least one activity of the protein.

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27. A non-human transgenic animal modified to contain a nucleic acid molecule of any of claims 1-9 or SEQ ID NO: 10.

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28. The transgenic animal of claim 27, wherein the nucleic acid molecule contains a mutation that prevents expression of the encoded protein.

29. A method of diagnosing a disease state in a subject, comprising:

determining the level of expression of a nucleic acid molecule or protein of any one of claims 1-9 or 18, a nucleic acid comprising SEQ ID NO: 9 or a protein molecule comprising SEQ ID NO: 10.

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30. The method of claim 29, wherein the disease state is liver cancer.

31. The method of claim 30, wherein the disease state is hepatocellular carcinoma.

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32. The method of claim 29, wherein the disease state is a malignant neoplasm.

33. The method of claim 32, wherein the malignant neoplasm occurs in the bladder, breast, cervix, colon, kidney, lung, myometrium, ovary, pancreas, prostate, rectum skin,
5 small intestine, soft tissue, spleen, stomach, testis or thyroid gland.

34. A composition comprising a diluent and a polypeptide or protein selected from the group consisting of an isolated polypeptide comprising the amino acid sequence of SEQ ID NO: 2, 4, 6, 8 or 10, an isolated polypeptide comprising a fragment of at least 10
10 amino acids of SEQ ID NO: 2, 4, 6, 8 or 10, an isolated polypeptide comprising conservative amino acid substitutions of SEQ ID NO: 2 or 4, an isolated polypeptide comprising naturally occurring amino acid sequence variants of SEQ ID NO: 2 or 4, an isolated polypeptide exhibiting at least about 75% amino acid sequence identity with SEQ ID NO: 2 or 4, and a polypeptide exhibiting at least about 95% amino acid
15 sequence identity with SEQ ID NO: 6, 8 or 10.